

### ABSTRACT

Multifunctional liquid phase carriers (LPCs) and methods of using LPCs for the preparation of biopolymers are provided. The LPCs are highly symmetrical compounds that possess more than two points of attachment for biopolymer synthesis. The LPCs have the formula  $Sp(X^1)_n$ , where Sp is a highly symmetrical moiety such that all  $X^1$  groups are equivalent.  $X^1$  is a functional group that is suitable for biopolymer synthesis, including OH, SH,  $NH_2$ , COOH and the like. Biopolymers that may be produced using the methods provided include oligonucleotides, peptides, protein nucleic acids (PNAs) and oligosaccharides. Analogs of the biopolymers may also be prepared using the methods.